TRANSACTIONS

OF THE

AMERICAN SOCIETY OF CIVIL ENGINEERS

INDEX

VOLUME 91

DECEMBER, 1927

SUBJECT INDEX, PAGE 1188
AUTHOR INDEX, PAGE 1198

Titles of papers are in quotation marks when given with the author's name.

VOLUME 91

SUBJECT INDEX

ADDRESSES.

"Address at the Annual Convention in Denver, Colo., July 13, 1927." John F. Stevens. 946.

"Address at the Annual Convention in Philadelphia, Pa., October 5, 1926." George S. Davison. 524.

AERIAL SURVEYING.

See **SURVEYING, AERIAL.**

AQUEDUCTS.

"The Ancient Roman Aqueduct at Athens." James F. Case. 281.

ARCHES.

"Experimental Deformation of a Cylindrical Arched Dam." B. A. Smith. (With Discussion). 705.

The design of a multiple-arch system and permissible simplifications. Discussion by A. C. Janni. 459.

ASPHALT.

"North Carolina Bituminous Earth Roads." William B. Catchings. (With Discussion.) 1029.

BARGES.

"The New York State Barge Canal and Its Operation." Roy G. Finch. (With Discussion.) 854.

BEAMS.

"Distribution of Reinforcing Steel in Concrete — and Slabs." Boyd S. Myers. (With Discussion.) 174.

BITUMEN.

See **ASPHALT.**

BRIDGE FLOORS.

"Quantities of Materials and Costs per Square Foot of Floor for Highway and Electric-Railway Long-Span Suspension Bridges." J. A. L. Waddell. 884. Discussion: T. Kennard Thomson, H. B. Muckleston, Allston Dana,

I. Oesterblom, Leon S. Moisseiff, Francis P. Witmer, V. A. Eberly, Horatio P. Van Cleve, Wendell P. Brown, William G. Grove, M. Godard, O. H. Ammann, and Frank W. Skinner. 911.

BRIDGES.

"Quantities of Materials and Costs per Square Foot of Floor for Highway and Electric-Railway Long-Span Suspension —." J. A. L. Waddell. (With Discussion.) 884.

"Sag-Tension Curves." Edwin S. Parker. (With Discussion.) 291.

The design of a multiple-arch system and permissible simplifications. Discussion by A. C. Janni. 459.

BUILDINGS.

"The Stresses in a Free Prismatic Rod Under a Single Force Normal to Its Axis." Joseph N. Le Conte. (With Discussion.) 968.

CABLES.

"Sag-Tension Curves." Edwin S. Parker. 291. Discussion: W. Marshall Page, and J. C. Stevens. 301.

CANALS.

"The New York State Barge Canal and Its Operation." Roy G. Finch. 854. Discussion: Frederic H. Fay, Maurice W. Williams, T. Kennard Thomson, Harry Taylor, E. P. Goodrich, F. Lavis, J. K. Finch, E. E. King, and Frank L. Bolton. 862.

"The Panama Canal": Address at the Annual Convention in Denver, Colo., July 13, 1927. John F. Stevens. 946.

CAST IRON.

"Tests of Manhole Covers." T. J. Corwin, Jr. (With Discussion.) 991.

CHIMNEYS.

"The Stresses in a Free Prismatic Rod Under a Single Force Normal to Its Axis." Joseph N. Le Conte. (With Discussion.) 968.

CITIES.

"The Development of Mariemont, Ohio." Frederic H. Fay. (With Discussion.) 737.

CITY PLANNING.

"Aerial Surveys for —." Gerard H. Matthes. (With Discussion.) 314.

"Hexagonal Planning, Traffic Intercepter, and Orbit." Noulan Cauchon. 780. Discussion: John Nolen, E. P. Goodrich, Lawrence Veiller, and George B. Ford. 790.

"The Cincinnati City Plan Is Now Law." George B. Ford. 759. Discussion: Alfred Bettman, Edward M. Bassett, Arthur C. Comey, E. P. Goodrich, Thomas T. Towles, Harland Bartholomew, and Thomas H. Reed. 763.

"The Development of Mariemont, Ohio." Frederic H. Fay. 737. Discussion: Charles Wellford Leavitt. 754.

"The Engineer and the Town Plan." James Ewing. 303. Discussion: Noulan Cauchon, Morris Knowles, William T. Lyle, Charles H. Paul, and Stephen Child. 309.

"Town Planning and Its Relations to the Professions Involved." John Nolen. 721. Discussion: John W. Alvord, William T. Lyle, Thomas Adams, Edward M. Bassett, J. E. Willoughby, and Noulan Cauchon. 728.

CONCRETE.

"Distribution of Reinforcing Steel in — Beams and Slabs." Boyd S. Myers. (With Discussion.) 174.

"Finishing and Curing of — Roads." C. L. McKesson. (With Discussion.) 137.

"Producing — of Uniform Quality." Roderick B. Young. 334. Discussion: T. P. Watson, Harry C. Boyden, William H. Adams, Thomas K. A. Hendrick, John G. Ahlers, and William M. Hall. 347.

Specifications for — and — materials as used in the construction of the Portland Association Building, Chicago, Ill. 366.

"Unit Stresses in Structural Materials". A Symposium. F. E. Turneaure, A. E. Lindau, D. B. Steinman, and J. A. Newlin. (With Discussion.) 387.

"Water-Ratio Specification for —." F. R. McMillan and Stanton Walker. 355. Discussion: C. R. F. Coutlee, A. S. Woodle, Jr., T. P. Watson, Charles S. Whitney, Harry C. Boyden, L. A. Perry, John G. Ahlers, and Thaddeus Merriman. 370.

DAMS.

"Experimental Deformation of a Cylindrical Arched Dam." B. A. Smith. 705. Discussion: William Cain, Charles W. Comstock, and W. H. R. Nimmo. 712.

"Water-Proof Masonry —." W. Watters Pagon. 236. Discussion: Karl R. Kennison, P. A. Beatty, R. W. Gausmann, H. F. Dunham, H. de B. Parsons, Alfred D. Flinn, J. B. W. Gardiner, T. Kennard Thomson, V. Bernard Siems, B. F. Jakobsen, Eugene E. Halmos, Edward Wegmann, Malcolm Elliott, K. E. Hilgard, Thomas H. Wiggin, Jerome W. Howe, W. H. R. Nimmo, E. W. Lane, Nathan C. Johnson, and F. W. Scheidenhelm. 244.

DETRITUS TANKS.

See **GRIT CHAMBERS.**

EARTHQUAKES.

"The Stresses in a Free Prismatic Rod Under a Single Force Normal to Its Axis." Joseph N. Le Conte. (With Discussion.) 968.

ELECTRIC TRANSMISSION.

See **POWER TRANSMISSION.**

ENGINEERING.

"A Century and a Half of American —": Address at the Annual Convention in Philadelphia, Pa., October 5, 1926. George S. Davison. 542.

FREIGHT.

"The New York State Barge Canal and Its Operation." Roy G. Finch. (With Discussion.) 854.

GARBAGE DISPOSAL.

See **REFUSE DISPOSAL.**

GRAPHIC CHARTS.

"Straight Line Plotting of Skew Frequency Data." R. D. Goodrich. (With Discussion.) 1.

GRIT CHAMBERS.

"Grit Chamber Practice": A Symposium. George B. Gascoigne, F. A. Dallyn, Arthur J. Martin, and Karl Imhoff. (With Discussion.) 495.

HIGHWAYS.

"Economic and Engineering Problems in Highway Location." W. W. Crosby. 1007. Discussion: L. O. Marden, Charles B. Breed, Fred Lavis, George E. Goodwin, H. C. Boyden, and John P. Hallihan. 1017.

See also **ROADS.**

HYDRAULICS.

See **WATER, FLOW OF, IN PIPES.**

INCINERATORS.

See **REFUSE DESTRUCTORS.**

LAW.

"Some Projects for Sewage Treatment Under the Illinois Sanitary District Act of 1917." Samuel A. Greeley. 441.

"The Cincinnati City Plan Is Now —." George B. Ford. (With Discussion.) 759.

MANHOLE COVERS.

"Tests of —". T. J. Corwin, Jr. 991. Discussion: M. M. O'Shaughnessy. 1005.

MAPS.

"Aerial Surveys for City Planning." Gerard H. Matthes. (With Discussion.) 314.

MASONRY.

"Water-Proof — Dams." W. Watters Pagon. (With Discussion.) 236.

MATERIALS OF CONSTRUCTION.

"Unit Stresses in Structural Materials": A Symposium. F. E. Turneaure, A. E. Lindau, D. B. Steinman, and J. A. Newlin. 387. Discussion:

Lee H. Miller, E. F. Kenney, G. L. Taylor, Lewis D. Rights, Rudolph P. Miller, L. S. Moisseiff, Gustav Lindenthal, Robert C. Strachan, Charles S. Whitney, J. A. L. Waddell, R. A. Caughey, E. G. Walker, Thomas K. A. Hendrick, F. N. Menefee, Clement E. Chase, and John Tucker, Jr. 408.

MEMOIRS OF DECEASED MEMBERS.

Albright, Henry Fleetwood. 1057.
Aydlotte, Roswell James. 1159.
Bettes, Richard Stockwell. 1161.
Bland, Miles Carlisle. 1060.
Burchard, Anson Wood. 1164.
Canals, José Antonio. 1062.
Chamberlain, Phillip William. 1064.
Cunningham, Andrew Oswald. 1066.
Dabney, Augustine Lee. 1068.
Deen, James Work. 1070.
Dressler, Harvey Jacob. 1072.
Duck, Allen Douglas. 1073.
Edmondstone, George Stovall. 1075.
Elliott, Charles Gleason. 1077.
Ellis, Thomas Pengelly. 1167.
Endicott, Mordecai Thomas. 1051.
Ernst, Oswald Herbert. 1079.
Felton, Herbert Clark. 1082.
Fernald, Clarence Thayer. 1083.
Fickes, Clark Robinson. 1085.
Fisher, Samuel Brownlee. 1087.
Fowle, Bernard Hooe, Jr. 1168.
Frommer, Charles. 1089.
Gadsden, George Morrall. 1090.
Gale, Clarence Stephens. 1170.
Goriachkovsky, Vladimir Vasillievich. 1092.
Graves, James Madison. 1094.
Hannum, William. 1171.
Hood, William. 1096.
House, Francis Edwin. 1100.
Kibbe, Augustus Sayre. 1102.
Knapp, Zac Ellis. 1104.
Kora, Dahyabhai Balabhai. 1175.
Lyons, Harold Chandos. 1177.
McClure, Wilbur Fisk. 1106.
Metcalf, Leonard. 1110.
Morris, Marshall. 1114.
Newman, Emil. 1116.
Oesterle, Harry Adolph, Jr. 1179.
Olmsted, Ashbel Edward. 1118.
Perry, Chauncy Rusch. 1122.
Phipps, Thomas Elmer. 1124.
Pitkethly, David Thomas. 1180.
Raymond, William Galt. 1126.

Rowland, Charles Bradley. 1129.
Shearer, Charles English. 1181.
Sherman, Richard Willette. 1130.
Southgate, John McKnight. 1183.
Sumner, Walter Augustus. 1133.
Sutton, Frank. 1136.
Taylor, Norton Longstreth. 1138.
Thomes, Edwin Howard. 1141.
Thompson, Henry Clark. 1143.
Thomson, John. 1145.
Tillinghast, Frederick Howard. 1146.
Waldo, Mark Albigence. 1148.
Wells, James Hollis. 1150.
Westcott, Frank Thomas. 1152.
Winfree, Peyton Brown. 1185.
Wolf, Julius Herman George. 1153.
Wood, Henry Beecher. 1155.
Young, Charles Griffith. 1157.

METERS.

"Venturi Tube Characteristics." J. W. Ledoux, 565. Discussion: J. E. Gibson, D. E. Davis, Joseph A. Russell, W. S. Pardoe, Bayard F. Snow, Morrough P. O'Brien, and Arthur L. Collins. 575.

PAVEMENT.

"Finishing and Curing of Concrete Roads." C. L. McKesson. (With Discussion.) 137.
"North Carolina Bituminous Earth Roads." William B. Catchings. (With Discussion.) 1029.
"Recent Developments in Concrete Pavements." H. Eltinge Breed. (With Discussion.) 1033.

PHOTOGRAPHY, AERIAL.

"Aerial Surveys for City Planning." Gerard H. Matthes. (With Discussion.) 314.

POWER TRANSMISSION.

"Sag-Tension Curves." Edwin S. Parker. (With Discussion.) 291.

PROBABILITIES, THEORY OF.

"Storage Required for the Regulation of Stream Flow." Charles E. Sudler. (With Discussion.) 622.
"Straight Line Plotting of Skew Frequency Data". R. D. Goodrich, 1. Discussion: H. Alden Foster, A. Streiff, W. A. Shewhart, W. H. R. Nimmo, John Tucker, Jr., L. Standish Hall, E. P. Goodrich, Arne Fisher, and Allen Hazen. 44.

RAINFALL.

"Straight Line Plotting of Skew Frequency Data." R. D. Goodrich. (With Discussion.) 1.

REFUSE DESTRUCTORS.

"Garbage Disposal": A Symposium. Samuel A. Greeley, Edward D. Rich, W. T. Knowlton, Arthur Boniface, J. A. Burnett, and John V. Lewis. (With Discussion.) 799.

REFUSE DISPOSAL.

"Garbage Disposal": A Symposium. Samuel A. Greeley, Edward D. Rich, W. T. Knowlton, Arthur Boniface, J. A. Burnett, and John V. Lewis. 799. Discussion: Walter A. Sperry, Kenneth Allen, Harrison P. Eddy, L. L. Tribus, J. F. Jackson, and William A. Bassett. 837.

REINFORCED CONCRETE.

"Distribution of Reinforcing Steel in Concrete Beams and Slabs." Boyd S. Myers. 174. Discussion: Edward Godfrey, H. C. Sandbeck, James B. Newman, E. F. Rockwood, C. A. Willson, F. Theodore Mavis, Jacob Feld, Charles S. Whitney, David A. Molitor, L. J. Larson, Anton Brandtzaeg, and John J. Gould. 190.

"Unit Stresses in Structural Materials": A Symposium. F. E. Turneaure, A. E. Lindau, D. B. Steinman, and J. A. Newlin. (With Discussion.) 387.

RESERVOIRS.

"Storage Required for the Regulation of Stream Flow." Charles E. Sudler. (With Discussion.) 622.

ROADS.

"Economic and Engineering Problems in Highway Location." W. W. Crosby. (With Discussion.) 1007.

"Finishing and Curing of Concrete —." C. L. McKesson. 137. Discussion: E. S. Borgquist, and Herbert J. Gilkey. 152.

"North Carolina Bituminous Earth —." William B. Catchings. 1029. Discussion: Carlton N. Conner. 1031.

"Recent Developments in Concrete Pavements." H. Eltinge Breed. 1033. Discussion: A. T. Goldbeck, Elmer G. Hooper, T. M. Ripley, W. C. Hammatt, R. W. Crum, Carlton N. Conner, H. C. Boyden, C. Raymond Hulsart, and Edward Godfrey. 1038.

RUN-OFF.

"Straight Line Plotting of Skew Frequency Data." R. D. Goodrich. (With Discussion.) 1.

SEPTIC TANKS.

"The Design, Construction, and Operation of a Small Sewage Disposal Plant." Franklin Hudson, Jr. (With Discussion.) 596.

SEWAGE DISPOSAL.

"Grit Chamber Practice": A Symposium. George B. Gascoigne, F. A. Dallyn, Arthur J. Martin, and Karl Imhoff. 495. Discussion: John F.

Skinner, A. F. Macallum, Kenneth Allen, Harrison P. Eddy, and R. S. Rankin. 524.
"Some Projects for Sewage Treatment Under the Illinois Sanitary District Act of 1917." Samuel A. Greeley. 441.
"The Design, Construction, and Operation of a Small — Plant." Franklin Hudson, Jr. 596. Discussion: H. L. Thackwell, Webster L. Benham, and L. H. Enslow. 606.

SEWAGE TREATMENT.
See **SEWAGE DISPOSAL.**

SEWERAGE.
"Some Projects for Sewage Treatment Under the Illinois Sanitary District Act of 1917". Samuel A. Greeley. 441.

SLABS.
"Distribution of Reinforcing Steel in Concrete Beams and —." Boyd S. Myers. (With Discussion.) 174.

SNOW REMOVAL.
"— Problems of Organization and Operation." George E. Hamlin. 119. Discussion: Howard C. Means, Z. E. Sevison, B. J. Finch, and W. A. Van Duzer. 124.

STATISTICS.
"Straight Line Plotting of Skew Frequency Data." R. D. Goodrich. (With Discussion.) 1.

STEEL.
"Tests of Manhole Covers." T. J. Corwin, Jr. (With Discussion.) 991.
"Unit Stresses in Structural Materials": A Symposium. F. E. Turneaure, A. E. Lindau, D. B. Steinman, and J. A. Newlin. (With Discussion.) 387.

STRAIN.
"Experimental Deformation of a Cylindrical Arched Dam." B. A. Smith. (With Discussion.) 705.

STREAM FLOW.
See **WATER, FLOW OF, IN OPEN CHANNELS.**

STRESS.
"Experimental Deformation of a Cylindrical Arched Dam." B. A. Smith. (With Discussion.) 705.
"Tests of Manhole Covers." T. J. Corwin, Jr. (With Discussion.) 991.
"The Stresses in a Free Prismatic Rod Under a Single Force Normal to Its Axis." Joseph N. Le Conte. 968. Discussion: William R. Osgood, Henry D. Dewell, and A. C. Schwager. 982.

"Unit Stresses in Structural Materials": A Symposium. F. E. Turneaure, A. E. Lindau, D. B. Steinman, and J. A. Newlin. (With Discussion.) 387.

STRUCTURAL MATERIALS.
See **MATERIALS OF CONSTRUCTION.**

STRUCTURAL STEEL.
See **STEEL.**

SURVEYING.
"Economic and Engineering Problems in Highway Location." W. W. Crosby. (With Discussion.) 1007.

SURVEYING, AERIAL.
"Aerial Surveys for City Planning." Gerard H. Matthes. 314. Discussion: Arthur S. Tuttle, F. L. Olmsted, Charles N. Green, and Theron M. Ripley. 326.

SUSPENSION BRIDGES.
"Quantities of Materials and Costs per Square Foot of Floor for Highway and Electric-Railway Long-Span —." J. A. L. Waddell. (With Discussion.) 884.
"Sag-Tension Curves." Edwin S. Parker. (With Discussion.) 291.

TIMBER.
"Unit Stresses in Structural Materials": A Symposium. F. E. Turneaure, A. E. Lindau, D. B. Steinman, and J. A. Newlin. (With Discussion.) 387.

TOWN PLANNING.
See **CITY PLANNING.**

TRAFFIC.
"Hexagonal Planning, — Intercepter, and Orbit." Noulan Cauchon. (With Discussion.) 780.

TRANSMISSION LINES.
See **POWER TRANSMISSION.**

TRANSPORTATION.
"The New York State Barge Canal and Its Operation." Roy G. Finch. (With Discussion.) 854.

TUNNELS.
"The Ancient Roman Aqueduct at Athens." James F. Case. 281.

UNIT STRESSES.
See **STRESS.**

WATER, FLOW OF, IN OPEN CHANNELS.
"Storage Required for the Regulation of Stream Flow." Charles E. Sudler. (With Discussion.) 622.

WATER, FLOW OF, IN PIPES.
"Venturi Tube Characteristics." J. W. Ledoux. (With Discussion.) 565.

WATER METERS.
See **METERS.**

WATER-PROOFING.
"Water-Proof Masonry Dams." W. Watters Pagon. (With Discussion.) 236.

WATER STORAGE.
"Storage Required for the Regulation of Stream Flow." Charles E. Sudler. 622. Discussion: Edward H. Sargent, Allen Hazen, Roger W. Armstrong, H. Alden Foster, Joel D. Justin, L. Standish Hall, Edward M. Craig, Jr., W. W. Brush, Richard H. Gould, A. Streiff, Sigurd Eliassen, Theodore Hatch, and L. T. Guy. 661.

WATERWAYS.
See **CANALS.**

WATER-WORKS.
"The Ancient Roman Aqueduct at Athens." James F. Case. 281.
"The Water Supply System of Montreal, Quebec, Canada." Frederick E. Field. 538.

WIRE ROPE.
"Sag-Tension Curves." Edwin S. Parker. (With Discussion.) 291.

ZONING OF CITIES.
"The Cincinnati City Plan Is Now Law." George B. Ford. (With Discussion.) 759.

AUTHOR INDEX

ADAMS, THOMAS.
Town planning and the professions involved. 730.

ADAMS, WILLIAM H.
Producing concrete of uniform quality. 348.

AHLERS, JOHN G.
Producing concrete of uniform quality. 349.
Water-ratio specification for concrete. 380.

ALBRIGHT, HENRY FLEETWOOD.
Memoir of. 1057.

ALLEN, KENNETH.
Garbage disposal. 838.
Grit chamber practice. 533.

ALVORD, JOHN W.
Town planning and the professions involved. 728.

AMMANN, O. H.
Costs of suspension bridges. 932.

ARMSTRONG, ROGER W.
Storage and regulation of stream flow. 667.

AYDLOTTE, ROSWELL JAMES.
Memoir of. 1159.

BARTHOLOMEW, HARLAND.
Cincinnati city plan is now law. 773.

BASSETT, EDWARD M.
Cincinnati city plan is now law. 766.
Town planning and the professions involved. 732.

BASSETT, WILLIAM A.
Garbage disposal. 847.

BEATTY, P. A.
Water-proof masonry dams. 244.

BENHAM, WEBSTER L.
Sewage disposal plant for small town. 608.

BETTES, RICHARD STOCKWELL.
Memoir of. 1161.

BETTMAN, ALFRED.
Cincinnati city plan is now law. 763.

BLAND, MILES CARLISLE.
Memoir of. 1060.

BOLTON, FRANK L.
Operation of New York State Barge Canal. 876.

BONIFACE, ARTHUR.
"The Disposal of Organic Waste by the Beccari System at Scarsdale, New York." 820.

BORGQUIST, E. S.
Finishing and curing of concrete roads. 152.

BOYDEN, H. C.
Developments in concrete pavements. 1047.
Problems of highway location. 1025.
Producing concrete of uniform quality. 348.
Water-ratio specification for concrete. 375.

BRANDTZAEG, ANTON.
Reinforcing steel in beams and slabs. 225.

BREED, CHARLES B.
Problems of highway location. 1017.

BREED, H. ELTINGE.
"Recent Developments in Concrete Pavements." 1033.

BROWN, WENDELL P.
Costs of suspension bridges. 928.

BRUSH, W. W.
Storage and regulation of stream flow. 675.

BURCHARD, ANSON WOOD.
Memoir of. 1164.

BURNETT, J. A.
"High-Temperature Incineration at Toronto, Ontario, Canada." 824.

CAIN, WILLIAM.
Deformation of cylindrical arched dam. 712.

CANALS, JOSE ANTONIO.
Memoir of. 1062.

CASE, JAMES F.
"The Ancient Roman Aqueduct at Athens." 281.

CATCHINGS, WILLIAM B.
"North Carolina Bituminous Earth Roads." 1029.

CAUCHON, NOULAN.
"Hexagonal Planning, Traffic Intercepter, and Orbit." 780.
The engineer and the town plan. 309.
Town planning and the professions involved. 734.

CAUGHEY, R. A.
Unit stresses in structural materials. 421.

CHAMBERLAIN, PHILLIP WILLIAM.
Memoir of. 1064.

CHASE, CLEMENT E.
Unit stresses in structural materials. 427.

CHILD, STEPHEN.
The engineer and the town plan. 312.

COLLINS, ARTHUR L.
Venturi tube characteristics. 588.

COMEY, ARTHUR C.
Cincinnati city plan is now law. 769.

COMSTOCK, CHARLES W.
Deformation of cylindrical arched dam. 713.

CONNER, CARLTON N.
Developments in concrete pavements. 1032.
North Carolina bituminous earth roads. 1046.

CORWIN, T. J., JR.
"Tests of Manhole Covers." 991.

COUTLEE, C. R. F.
Water-ratio specification for concrete. 370.

CRAIG, EDWARD M., JR.
Storage and regulation of stream flow. 674.

CROSBY, W. W.
"Economic and Engineering Problems of Highway Location." 1007.

CRUM, R. W.
Developments in concrete pavments. 1045.

CUNNINGHAM, ANDREW OSWALD.
Memoir of. 1066.

DABNEY, AUGUSTINE LEE.
Memoir of. 1068.

DALLYN, F. A.
"Canadian Grit Chamber Practice." 513.

DANA, ALLSTON.
Costs of suspension bridges. 914.

DAVIS, D. E.
Venturi tube characteristics. 575.

DAVISON, GEORGE S.
"A Century and a Half of American Engineering: Address at the Annual Convention in Philadelphia, Pa., October 5, 1926." 542.

DEEN, JAMES WORK.
Memoir of. 1070.

DEWELL, HENRY D.
Stresses in a free prismatic rod. 984.

DRESSLER, HARVEY JACOB.
Memoir of. 1072.

DUCK, ALLEN DOUGLAS.
Memoir of. 1073.

DUNHAM, H. F.
Water-proof masonry dams. 246.

EBERLY, V. A.
Costs of suspension bridges. 924.

EDDY, HARRISON P.
Garbage disposal. 844.
Grit chamber practice. 534.

EDMONSTONE, GEORGE STOVALL.
Memoir of. 1075.

ELIASSEN, SIGURD.
Storage and regulation of stream flow. 686.

ELLIOTT, CHARLES GLEASON.
Memoir of. 1077.

ELLIOTT, MALCOLM.
Water-proof masonry dams. 261.

ELLIS, THOMAS PENGELLY.
Memoir of. 1167.

ENDICOTT, MORDECAI THOMAS.
Memoir of. 1051.

ENSLOW, L. H.
Sewage disposal plant for small town. 609.

ERNST, OSWALD HERBERT.
Memoir of. 1079.

EWING, JAMES.
"The Engineer and the Town Plan." 303.

FAY, FREDERIC H.
Operation of New York State Barge Canal. 862.
"The Development of Mariemont, Ohio." 737.

FELD, JACOB.
Reinforcing steel in beams and slabs. 209.

FELTON, HERBERT CLARK.
Memoir of. 1082.

FERNALD, CLARENCE THAYER.
Memoir of. 1083.

FICKES, CLARK ROBINSON.
Memoir of. 1085.

FIELD, FREDERICK E.
"The Water Supply System of Montreal, Quebec, Canada." 538.

FINCH, B. J.
Snow removal problems. 128.

FINCH, J. K.
Operation of New York State Barge Canal. 872.

FINCH, ROY G.
"The New York State Barge Canal and Its Operation." 854.

FISHER, ARNE.
Plotting skew frequency data. 83.

FISHER, SAMUEL BROWNLEE.
Memoir of. 1087.

FLINN, ALFRED D.
Water-proof masonry dams. 249.

FORD, GEORGE B.
Hexagonal city planning. 795.
"The Cincinnati City Plan Is Now Law." 759.

FOSTER, H. ALDEN.
Plotting skew frequency data. 44.
Storage and regulation of stream flow. 667.

FOWLE, BERNARD HOOE, JR.
Memoir of. 1168.

FROMMER, CHARLES.
Memoir of. 1089.

GADSDEN, GEORGE MORRALL.
Memoir of. 1090.

GALE, CLARENCE STEPHENS.
Memoir of. 1170.

GARDINER, J. B. W.
Water-proof masonry dams. 249.

GASCOIGNE, GEORGE B.
"Grit Chambers for Sewage Treatment Works." 496.

GAUSMANN, R. W.
Water-proof masonry dams. 245.

GIBSON, J. E.
Venturi tube characteristics. 575.

GILKEY, HERBERT J.
Finishing and curing of concrete roads. 153.

GODARD, M.
Costs of suspension bridges. 931.

GODFREY, EDWARD.
Developments in concrete pavements. 1048.
Reinforcing steel in beams and slabs. 190.

GOLDBECK, A. T.
Developments in concrete pavements. 1038.

GOODRICH, E. P.
Cincinnati city plan is now law. 772.
Hexagonal city planning. 791.
Operation of New York State Barge Canal. 869.
Plotting skew frequency data. 59.

GOODRICH, R. D.
"Straight Line Plotting of Skew Frequency Data." 1.

GOODWIN, GEORGE E.
Problems of highway location. 1024.

GORIACHKOVSKY, VLADIMIR VASILLIEVICH.
Memoir of. 1092.

GOULD, JOHN J.
Reinforcing steel in beams and slabs. 232.

GOULD, RICHARD H.
Storage and regulation of stream flow. 677.

GRAVES, JAMES MADISON.
Memoir of. 1094.

GREELEY, SAMUEL A.
"Administrative and Engineering Work in the Collection and Disposal of Garbage: A Review of the Problem." 800.
"Some Projects for Sewage Treatment Under the Illinois Sanitary District Act of 1917." 441.

GREEN, CHARLES N.
Aerial surveys for city planning. 329.

GROVE, WILLIAM G.
Costs of suspension bridges. 929.

GUY, L. T.
Storage and regulation of stream flow. 696.

HALL, L. STANDISH.
Plotting skew frequency data. 57.
Storage and regulation of stream flow. 671.

HALL, WILLIAM M.
Producing concrete of uniform quality. 351.

HALLIHAN, JOHN P.
Problems of highway location. 1026.

HALMOS, EUGENE E.
Water-proof masonry dams. 254.

HAMLIN, GEORGE E.
"Snow Removal Problems of Organization and Operation." 119.

HAMMATT, W. C.
Developments in concrete pavements. 1044.

HANNUM, WILLIAM.
Memoir of. 1171.

HATCH, THEODORE.
Storage and regulation of stream flow. 690.

HAZEN, ALLEN.
Plotting skew frequency data. 90.
Storage and regulation of stream flow. 662.

HENDRICK, THOMAS K. A.
Producing concrete of uniform quality. 348.
Unit stresses in structural materials. 425.

HILGARD, K. E.
Water-proof masonry dams. 264.

HOOD, WILLIAM.
Memoir of. 1096.

HOOPER, ELMER G.
Developments in concrete pavements. 1040.

HOUSE, FRANCIS EDWIN.
Memoir of. 1100.

HOWE, JEROME W.
Water-proof masonry dams. 268.

HUDSON, FRANKLIN, JR.
"The Design, Construction, and Operation of a Small Sewage Disposal Plant." 596.

HULSART, C. RAYMOND.
Developments in concrete pavements. 1047.

IMHOFF, KARL.
"Grit Chambers in German Sewage Purification Plants." 523.

JACKSON, J. F.
Garbage disposal. 846.

JAKOBSEN, B. F.
Water-proof masonry dams. 252.

JANNI, A. C.
Design of multiple-arch system. 459.

JOHNSON, NATHAN C.
Water-proof masonry dams. 273.

JUSTIN, JOEL D.
Storage and regulation of stream flow. 669.

KENNEY, E. F.
Unit stresses in structural materials. 411.

KENNISON, KARL R.
Water-proof masonry dams. 244.

KIBBE, AUGUSTUS SAYRE.
Memoir of. 1102.

KING, E. E.
Operation of New York State Barge Canal. 875.

KNAPP, ZAC ELLIS.
Memoir of. 1104.

KNOWLES, MORRIS.
The engineer and the town plan. 310.

KNOWLTON, W. T.
"Garbage Disposal by Hog Feeding, Los Angeles, California." 818.

KORA, DAHYABHAI BALABHAI.
Memoir of. 1175.

LANE, E. W.
Water-proof masonry dams. 272.

LARSON, L. J.
Reinforcing steel in beams and slabs. 222.

LAVIS, FRED.
Operation of New York State Barge Canal. 869.
Problems of highway location. 1023.

LEAVITT, CHARLES WELLFORD.
Development of Mariemont, Ohio. 754.

LE CONTE, JOSEPH N.
"The Stresses in a Free Prismatic Rod Under a Single Force Normal to Its Axis." 968.

LEDOUX, J. W.
"Venturi Tube Characteristics." 565.

LEWIS, JOHN V.
"The Cobwell System of Garbage Reduction and Some Phases of Its Operation at Rochester, New York." 828.

LINDAU, A. E.
"Unit Working Stresses in Reinforced Concrete." 392.

LINDENTHAL, GUSTAV.
Unit stresses in structural materials. 416.

LYLE, WILLIAM T.
The engineer and the town plan. 311.
Town planning and the professions involved. 729.

LYONS, HAROLD CHANDOS.
Memoir of. 1177.

MACALLUM, A. F.
Grit chamber practice. 532.

McCLURE, WILBUR FISK.
Memoir of. 1106.

McKESSON, C. L.
"Finishing and Curing of Concrete Roads." 137.

McMILLAN, F. R.
"Water-Ratio Specification for Concrete." 355.

MARDEN, L. O.
Problems of highway location. 1017.

MARTIN, ARTHUR J.
"British Practice in the Design of Grit Chambers or Detritus Tanks." 516.

MATTHES, GERARD H.
"Aerial Surveys for City Planning." 314.

MAVIS, F. THEODORE.
Reinforcing steel in beams and slabs. 207.

MEANS, HOWARD C.
Snow removal problems. 124.

MENEFEE, F. N.
Unit stresses in structural materials. 426.

MERRIMAN, THADDEUS.
Water-ratio specification for concrete. 381.

METCALF, LEONARD.
Memoir of. 1110.

MILLER, LEE H.
Unit stresses in structural materials. 408.

MILLER, RUDOLPH P.
Unit stresses in structural materials. 414.

MOISSEIFF, LEON S.
Costs of suspension bridges. 918.
Unit stresses in structural materials. 414.

MOLITOR, DAVID A.
Reinforcing steel in beams and slabs. 212.

MORRIS, MARSHALL.
Memoir of. 1114.

MUCKLESTON, H. B.
Costs of suspension bridges. 912.

MYERS, BOYD S.
"Distribution of Reinforcing Steel in Concrete Beams and Slabs." 174.

NEWLIN, J. A.
"Unit Stresses in Timber." 400.

NEWMAN, EMIL.
Memoir of. 1116.

NEWMAN, JAMES B.
Reinforcing steel in beams and slabs. 197.

NIMMO, W. H. R.
Deformation of cylindrical arched dam. 716.
Plotting skew frequency data. 54.
Water-proof masonry dams. 271.

NOLEN, JOHN.
Hexagonal city planning. 790.
"Town Planning and Its Relations to the Professions Involved." 721.

O'BRIEN, MORROUGH P.
Venturi tube characteristics. 583.

OESTERBLOM, I.
Costs of suspension bridges. 917.

OESTERLE, HARRY ADOLPH, Jr.
Memoir of. 1179.

OLMSTED, ASHBEL EDWARD.
Memoir of. 1118.

OLMSTED, F. L.
Aerial surveys for city planning. 327.

OSGOOD, WILLIAM R.
Stresses in a free prismatic rod. 982.

O'SHAUGHNESSY, M. M.
Tests of manhole covers. 1005.

PAGE, W. MARSHALL.
Sag-tension curves. 301.

PAGON, W. WATTERS.
"Water-proof Masonry Dams." 236.

PARDOE, W. S.
Venturi tube characteristics. 577.

PARKER, EDWIN S.
"Sag-Tension Curves." 291.

PARSONS, H. de B.
Water-proof masonry dams. 247.

PAUL, CHARLES H.
The engineer and the town plan. 311.

PERRY, CHAUNCY RUSCH.
Memoir of. 1122.

PERRY, L. A.
Water-ratio specification for concrete. 376.

PHIPPS, THOMAS ELMER.
Memoir of. 1124.

PITKETHLY, DAVID THOMAS.
Memoir of. 1180.

RANKIN, R. S.
Grit chamber practice. 535.

RAYMOND, WILLIAM GALT.
Memoir of. 1126.

REED, THOMAS H.
Cincinnati city plan is now law. 776.

RICH, EDWARD D.
"Disposal by Hog Feeding: Garbage Collection and Disposal, Lansing, Michigan." 814.

RIGHTS, LEWIS D.
Unit stresses in structural materials. 413.

RIPLEY, THERON M.
Aerial surveys for city planning. 329.
Developments in concrete pavements. 1044.

ROCKWOOD, E. F.
Reinforcing steel in beams and slabs. 200.

ROWLAND, CHARLES BRADLEY.
Memoir of. 1129.

RUSSELL, JOSEPH A.
Venturi tube characteristics. 577.

SANDBECK, H. C.
Reinforcing steel in beams and slabs. 193.

SARGENT, EDWARD H.
Storage and regulation of stream flow. 661.

SCHEIDENHELM, F. W.
Water-proof masonry dams. 274.

SCHWAGER, A. C.
Stresses in a free prismatic rod. 987.

SEVISON, Z. E.
Snow removal problems. 126.

SHEARER, CHARLES ENGLISH.
Memoir of. 1181.

SHERMAN, RICHARD WILLETTE.
Memoir of. 1130.

SHEWHART, W. A.
Plotting skew frequency data. 50.

SIEMS, V. BERNARD.
Water-proof masonry dams. 251.

SKINNER, FRANK W.
Costs of suspension bridges. 937.

SKINNER, JOHN F.
Grit chamber practice. 524.

SMITH, B. A.
"Experimental Deformation of a Cylindrical Arched Dam." 705.

SNOW, BAYARD F.
Venturi tube characteristics. 581.

SOUTHGATE, JOHN McKNIGHT.
Memoir of. 1183.

SPERRY, WALTER A.
Garbage disposal. 837.

STEINMAN, D. B.
"Unit Stresses in Structural Steel (for Buildings)." 396.

STEVENS, J. C.
Sag-tension curves. 301.

STEVENS, JOHN F.
"The Panama Canal: Address at the Annual Convention in Denver, Colo., July 13, 1927." 946.

STRACHAN, ROBERT C.
Unit stresses in structural materials. 417.

STREIFF, A.
Plotting skew frequency data. 46.
Storage and regulation of stream flow. 681.

SUDLER, CHARLES E.
"Storage Required for the Regulation of Stream Flow." 622.

SUMNER, WALTER AUGUSTUS.
Memoir of. 1133.

SUTTON, FRANK.
Memoir of. 1136.

TAYLOR, G. L.
Unit stresses in structural materials. 413.

TAYLOR, HARRY.
Operation of New York State Barge Canal. 868.

TAYLOR, NORTON LONGSTRETH.
Memoir of. 1138.

THACKWELL, H. L.
Sewage disposal plant for small town. 606.

THOMES, EDWIN HOWARD.
Memoir of. 1141.

THOMPSON, HENRY CLARK.
Memoir of. 1143.

THOMSON, JOHN.
Memoir of. 1145.

THOMSON, T. KENNARD.
Costs of suspension bridges. 911.
Operation of New York State Barge Canal. 867.
Water-proof masonry dams. 250.

TILLINGHAST, FREDERICK HOWARD.
Memoir of. 1146.

TOWLES, THOMAS T.
Cincinnati city plan is now law. 772.

TRIBUS, L. L.
Garbage disposal. 845.

TUCKER, JOHN, JR.
Plotting skew frequency data. 56.
Unit stresses in structural materials. 433.

TURNEAURE, F. E.
"Unit Stresses." 388.

TUTTLE, ARTHUR S.
Aerial surveys for city planning.. 326.

VAN CLEVE, HORATIO P.
Costs of suspension bridges. 926.

VAN DUZER, W. A.
Snow removal problems. 129.

VEILLER, LAWRENCE.
Hexagonal city planning. 794.

WADDELL, J. A. L.
"Quantities of Materials and Costs per Square Foot of Floor for Highway and Electric-Railway Long-Span Suspension Bridges." 884.
Unit stresses in structural materials. 419.

WALDO, MARK ALBIGENCE.
Memoir of. 1148.

WALKER, E. G.
Unit stresses in structural materials. 424.

WALKER, STANTON.
"Water-Ratio Specification for Concrete." 355.

WATSON, T. P.
Producing concrete of uniform quality. 347.
Water-ratio specification for concrete. 371

WEGMANN, EDWARD.
Water-proof masonry dams. 255.

WELLS, JAMES HOLLIS.
Memoir of. 1150.

WESTCOTT, FRANK THOMAS.
Memoir of. 1152.

WHITNEY, CHARLES S.
Reinforcing steel in beams and slabs. 212.
Unit stresses in structural materials. 418.
Water-ratio specification for concrete. 375.

WIGGIN, THOMAS H.
Water-proof masonry dams. 266.

WILLIAMS, MAURICE W.
Operation of New York State Barge Canal. 865.

WILLOUGHBY, J. E.
Town planning and the professions involved. 733.

WILLSON, C. A.
Reinforcing steel in beams and slabs. 202.

WINFREE, PEYTON BROWN.
Memoir of. 1185.

WITMER, FRANCIS P.
Costs of suspension bridges. 923.

WOLF, JULIUS HERMAN GEORGE.
Memoir of. 1153.

WOOD, HENRY BEECHER.
Memoir of. 1155.

WOODLE, A. S., JR.
Water-ratio specification for concrete. 370.

YOUNG, CHARLES GRIFFITH.
Memoir of. 1157.

YOUNG, RODERICK B.
"Producing Concrete of Uniform Quality." 334.